

Mitral Valve Disease

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c00001 Uncomplicated Transcatheter Mitral Valve Repair With MitraClip

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p0015 A 91-year-old man with multiple morbidities and prohibitive surgical risk was referred for transcatheter repair with MitraClip (Abbott Vascular, Santa Clara, CA).

p0020 A, On transesophageal echocardiography (TEE), there was degenerative mitral regurgitation (MR) with a small flail segment (arrowhead). B, Severe MR was present on color flow imaging (arrow). C, On the TEE bi-commissural view, the flail segment arose slightly medial (arrowhead). D, Transseptal puncture is performed at a height of 3.9 cm to the mitral coaptation point. For the classic MitraClip system, a transseptal height of ~4.0 cm was sufficient, but a height of ~4.5 cm is typically used for MitraClip NT. E, The clip delivery system (CDS) is inserted into the steerable guide catheter (SGC) and straddled. Arrowheads indicate straddle markers; arrow indicates SGC tip. F, The CDS is steered toward the mitral valve using the M knob and posterior torque of the SGC, followed by opening of the clip arms. G, TEE with 3-dimensional imaging allows the clip arms to be centered over the target of pathology; the arms are positioned perpendicular to the coaptation plane of the mitral valve. H, The CDS crosses the mitral valve, followed by

closure of the arms to 120 degrees to enable cupping of the leaflets. I, Once the leaflets fall into the arms, the grippers are dropped and the arms are closed to 60 degrees. Leaflet insertion is confirmed in multiple views. J, The clip then is completely closed, followed by an assessment for MR reduction. This closure is preferably done in the bi-commissural view with simultaneous color imaging to show the location of the clip and effect on MR reduction. K, The mitral gradient is checked for possible stenosis. L, TEE imaging shows trivial residual MR after final clip deployment.

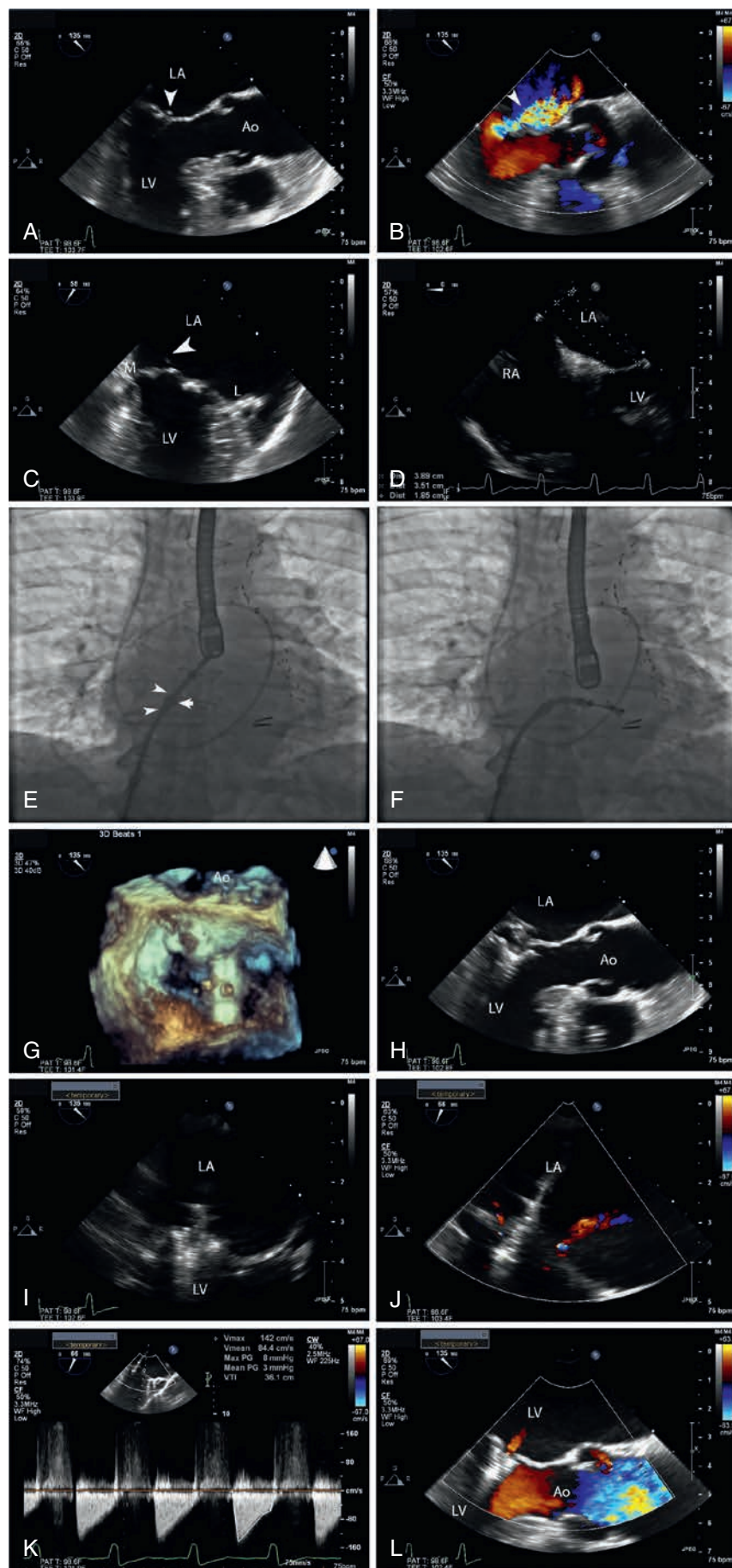
Ao, Ascending aorta; L, lateral; LA, left atrium; LV, left ventricle; M, medial; RA, right atrium; RV, right ventricle.

KEY POINTS

- In experienced centers, transcatheter mitral valve repair with MitraClip is an effective and safe procedure for the treatment of severe, symptomatic MR.

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